

Case 33: Effect of a Dietary Intervention on Cholesterol Levels

A nutritionist assesses the impact of a dietary intervention on cholesterol levels. The study involves measuring cholesterol levels in patients before and after a dietary intervention. The cholesterol level of each patient is classified into three levels: Low, Medium, and High. The following contingency table (Table 5.15) summarizes the cholesterol levels of 100 patients before and after the dietary intervention:

TABLE 5.15: Cholesterol Levels.

Before \ After	After		
	Low	Medium	High
Low	30	10	5
Medium	8	20	10
High	2	5	10

Determine if there is significant difference in cholesterol levels before and after the dietary intervention.

Initial Questions

1. What are the research objectives?
2. What are the statistical questions?
3. What is the response variable, and what is the data type of the response variable?
4. What are the explanatory variables of interest?
5. Are there covariates?
6. What is the population of interest?
7. What is the subject, and what is the number of distinct subjects?
8. Are there subject-level data?
9. Are response variables dependent (repeated measures / clustered subjects)?
10. Are the subjects selected randomly?
11. Are the subjects randomly assigned to different groups?

Initial Thoughts